Environmental Changes

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INTRODUCTION

In this chapter, we attempt to clarify why and how environmental changes have emerged as a stand-alone issue in international relations: what makes it so specific vis-à-vis other international relations' issue areas, and what are the remaining challenges facing policymakers and other actors in their effort to respond to the alarm bell rung by scientists and civil society movements. We describe the politics of international environmental changes as a dynamic process unfolding along two axes – horizontal diffusion and vertical institutionalization – and we delineate the particular roles played by 'epistemic communities' and the concept of 'environmental liberalism' in the framing of the solution space. We conclude by exploring a possible way, suggested by some scholars, to solve the apparent mismatch between scientific evidence of human-led environmental disasters and poor or limited policy reaction.

The first section stylizes environmental changes in international politics, putting forward three distinct features. The second section wraps up the intellectual history of the emergence of environmental changes in international politics. The third section takes stock of the leading factors that turned international environmental-protection law-making into a sustainable development 'meta-regime', the basic theories and concepts of which are encapsulated in the fourth section. The fifth section sets up the dynamics of change across horizontal diffusion and vertical institutionalization as constant characteristics of environmental international politics. The sixth and final section concludes with a comment on a possible driver of policy changes in the coming years: environmental litigation, put forward by communities of scholars to break the paradox of inaction.

THREE DISTINCT FEATURES OF ENVIRONMENTAL CHANGES IN INTERNATIONAL POLITICS

Available evidence of environmental changes in this early 21st century converges to flag environmental changes as a major threat to our economies and societies. Looking across the different environmental issues in which human activity interferes, it is now confirmed that the 'currently observed changes to the Earth System are unprecedented in human history' (EP, 2012). Humanity has wiped out 60% of mammals, birds, fish and reptiles since 1970; leading experts warn that the annihilation of wildlife is now an emergency that threatens civilization (Grooten and Almond, 2018). The temperature increase (which is expected to continue) in business-as-usual scenarios magnifies climate-related risks to health, livelihoods, food security, water supply, human security and economic growth. What is true for pollutants and species is also documented for natural resources in a broad sense: natural capital is being squandered at such a pace and scale that what scholars define as the 'safe operating space for humanity' could soon be breached, leading to a much less hospitable state of the Earth system (Steffen et al., 2015).

There are three salient features attached to the mounting evidence of human-led unsustainable environmental change, which all make it a particular field of international relations and global politics. First, environmental changes raise the issue not only of what policymakers and stakeholders should do but, more prominently, why they collectively fail to respond to the signal sent by scientists and their constituencies. While this problem can also arise with other topics of global politics and international relations, it is particularly acute in, and actually consubstantial to, the field of environmental changes. Normative prescriptions for policy action and positive explanations for polity inertia are the two streams of research that have continuously attracted scholars, the latter gaining

prominence as the former struggled to spark policy responses deemed appropriate by experts and citizens alike.

Second, global environmental changes raise particular prioritization problems, which ultimately lead to making environmental changes a second-class issue in international politics. These prioritization problems stem primarily from the time span between action (or inaction) and its consequences: this time span stretches well beyond the conventional business, budget and political cycles. It operates as a discounting mechanism on the expected reward of early action. From the first global summit on the environment, convened in 1972, up until today, the history of international environmental politics has been a history of non-state communities and renowned scientific figures shaking up the inertia of the State, challenging their short-termism and their capacity to serve the general interest across present and future generations. The scientific community has been a major actor of the emergence of environmental changes in the global policy agenda, as have civil society organizations, whose role of knowledge-brokers, watchdogs and spokespersons of non-human constituencies such as rivers or generations of humans not yet born have inherently conveyed a critique of the State as the sole legitimate actor in international relations (Dyer, 2007). While this should have relieved the State from part of the liability for the current state of the environment, it has sustained confusion on the respective role that state and non-state actors should play, without comparison to other major policy domains (Henry and Tubiana, 2018; Young, 1998).

Third, the advent of environmental changes as a distinct topic in international politics is consubstantial with the radical critique of the growth model held responsible for their salience and persistence. This critique has been a constant feature of environmental politics since the landmark publication of *The Limits to Growth* in 1972, also dubbed 'Meadows report', to which we will later turn. As the Club of Rome (2019),

which commissioned the report, today puts it, 'the message of [the] book still holds today: The earth's interlocking resources – the global system of nature in which we all live – probably cannot support present rates of economic and population growth much beyond the year 2100, if that long, even with advanced technology'. The 'limits of the planet' or 'planetary boundaries' we read about almost 50 years after the Meadows report was issued echo the original call from 1972 to radically transform our investment, consumption and production patterns. Tackling environmental changes, claims the stubborn voice, boils down to making a revolution happen: a 'green industrial revolution', whereby technological change is due to lead to the decoupling of wealth generation and exhaustible resource consumption, or a revolution in a more political sense, overturning the power positions and the rent situations deemed responsible for the plundering of our planet. The disruptive forces embedded in the policy responses demanded to tackle environmental changes explain both why green discourses have pervaded across a large spectrum of national politics in the early 21st century, matching 'reform' promises from left to right, and why it has remained to a large extent a slogan.

THE EMERGENCE OF ENVIRONMENTAL CHANGES IN INTERNATIONAL POLITICS

The emergence of environmental changes in international politics in the late 1960s and early 1970s crystallised in 1972 with the Stockholm UN Conference on the Human Environment (UNCHE). This conference is commonly referred to as the first attempt to internationalize an issue area that was previously considered essentially national or local. It was the culmination of converging forces taking root in the social movements of the 1960s, contesting the international order created at the end of the Second World War, and in the scientific avant-garde warning about the negative impacts of economic productivism.

The environmental question interacted with the large social movements of the 1960s and early 1970s and empowered itself as a social movement in its own right, with the creation of several international environmental NGOs, which are among the most powerful of international environmental politics today: the World Wide Fund for Nature (WWF, 1961), Friends of the Earth (1969) and Greenpeace (1971). Major environmental disasters, such as the first oil spill in 1967 (Torrey Canyon) and the chemical pollution of more than 600 kilometres of the Rhine in 1969, leading to the death of more than 20 million fish, also contributed to raise public and political awareness. Yet as Henry and Tubiana (2018) stress, the contestation did not only rely on a few publicized disasters. Student and youth movements, which were a central part of the 1967/1968 protests, were above all a societal movement in which the contestation of consumer society took a prominent place. The 1967/1968 protests were very sensible of environmentalists' arguments aiming to emancipate themselves from the confined naturalist and nature-conservationist circles.

It is against the backdrop of rising environmental alarm and social contest that the Secretary General of the UNCHE commissioned a report taking stock of existing trends in population, patterns of human settlement, land use, agriculture practices, air and water pollution, depletion of resources and climate change (Ward and Dubos, 1972). This report laid the foundation of what was not yet referred to as the 'global governance' of environmental changes. The declaration of the UNCHE built on Barbara Ward and Rémi Dubos' (1972) report, to formulate the following set of norms that would become the constant principles and hallmark of environmental politics during the following decades (Schachter, 1991).

1   *Information and knowledge* are the two key means enabling appropriate responses to environmental damages. The UNCHE Declaration proclaims that

through ignorance or indifference, we can do massive and irreversible harm to the earthly environment on which our life and well-being depend. Conversely, through fuller knowledge and wiser action, we can achieve for ourselves and our posterity a better life in an environment more in keeping with human needs and hopes. [...] For the purpose of attaining freedom in the world of nature, man must use knowledge to build, in collaboration with nature, a better environment. (UNCHE, 1972: 3)

2   *Multi-stakeholder and multi-scale responses* are required to address complex environmental changes, and these responses ultimately fall onto free individuals and performing institutions. The Declaration contends that

To achieve this environmental goal will demand the acceptance of responsibility by citizens and communities and by enterprises and institutions at every level, all sharing equitably in common efforts. Individuals in all walks of life as well as organizations in many fields, by their values and the sum of their actions, will shape the world environment of the future. (UNCHE, 1972: 3)

The emphasis placed on free individuals and on institutions shaping behavioural change foreshadows the advent of 'liberal environmentalism' as the single norm of international environmental politics – a term coined almost three decades later by Bernstein (2000) to describe the 'surprising convergence of environmental and liberal economic norms' after the fall of the Berlin Wall and the collapse of the Soviet Union (Bernstein, 2000: 465).

3   *Governments bear the greatest burden for action.* In spite of, or as a complement to, the above assertion, the Declaration posits that 'local and national governments will bear the greatest burden for large-scale environmental policy and action within their jurisdictions' (UNCHE, 1972: 3–4). International environmental law is intergovernmental in essence. Counter-intuitively, it is not a bid to erode sovereignty: rather, it extends sovereignty by giving states a say on issues that, like cross-border pollution, are beyond their power, according to the non-realist vision of international relations.

4   *Extensive cooperation among nations is indispensable.* The Declaration reminds us that 'A growing class of environmental problems, because they are regional or global in extent or because they affect the common international realm, will require extensive cooperation among nations and action by international organizations in the common interest' (UNCHE, 1972: 4). The protection of the environment beyond national jurisdiction and the management of pollutions transcending national boundaries both create an imperative obligation for cooperation, which adds to the more familiar coordination problem arising from the misalignment of nation states' preferences embodied in their domestic norms and policies.

5   *International cooperation to support the developing countries*. Not only is international cooperation needed in order to live up to the challenges of environmental changes, it 'is also needed in order to raise resources to support the developing countries in carrying out their responsibilities' (ibid.). Among the five principles or norms enlisted, this one is probably the only one that will experience a significant change. As read in 1972, it does not refer to any historical responsibility of a particular group of countries. 'In the developing countries most of the environmental problems are caused by under-development' (UNCHE, 1972: 3), the Declaration recalled; 'Therefore, the developing countries must direct their efforts to development, bearing in mind their priorities and the need to safeguard and improve the environment' (ibid.). Towards the same purpose, the Declaration goes on, 'the industrialized countries should make efforts to reduce the gap between themselves and the developing countries' (ibid.). The common but differentiated responsibility (CBDR) principle, enshrined in the 1992 Rio Declaration concluding the Earth Summit, retains the rather odd principle of economic catch-up as a solution to the poor environmental performance of poor countries; but additionally, it attaches to it the obligation for developed countries to bear the greatest burden for action, as a consequence of their historical responsibility.

The Declaration, unanimously adopted at the Stockholm conference, asserts in Principle 21 the competing principles of international responsibility and national authority within a general framework of rights and obligations. It proclaims that the states have 'the

responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction' (UNCHE, 1972: 5), and it also recognizes, 'in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies' (ibid.). Principle 22 called on states to 'cooperate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such states to areas beyond their jurisdiction' (ibid.). These two principles are often cited as the starting point and foundational norm of international environmental law (Bernstein, 2000: 468; Schachter, 1991: 459).

FROM ENVIRONMENTAL PROTECTION TO SUSTAINABLE DEVELOPMENT

Following Stockholm, developing countries were slow to set up environment-protection policies. They received no significant additional financial resources to address environmental problems. Developed countries on their side focused on some pollutants of international significance and nature-resource management at home, through an increasing number of bilateral and multilateral environmental agreements. Thanks to the data collated by Ronald B. Mitchell (2002–18) from the University of Oregon, as part of the *International Environmental Agreements Database Project*, it is possible to track the number of multilateral (MEA) and bilateral (BEA) environmental agreements back to the year 1800. This indicator can be used as a rough proxy of the status of environmental changes in international politics. Even though MEAs and BEAs existed before the Stockholm Conference and the Earth Summit convened 20 years after in Rio, the number of MEAs and BEAs signed in the decade following these two summits, which set and refined environmental international norms, is remarkable (Figure 85.1). By an overwhelming majority, these MEAs and BEAs were initiated by developed countries' concerns about industrial pollution.

The rising trend in international environmental agreements signed in the 1970s and 1990s and their total number could be read as
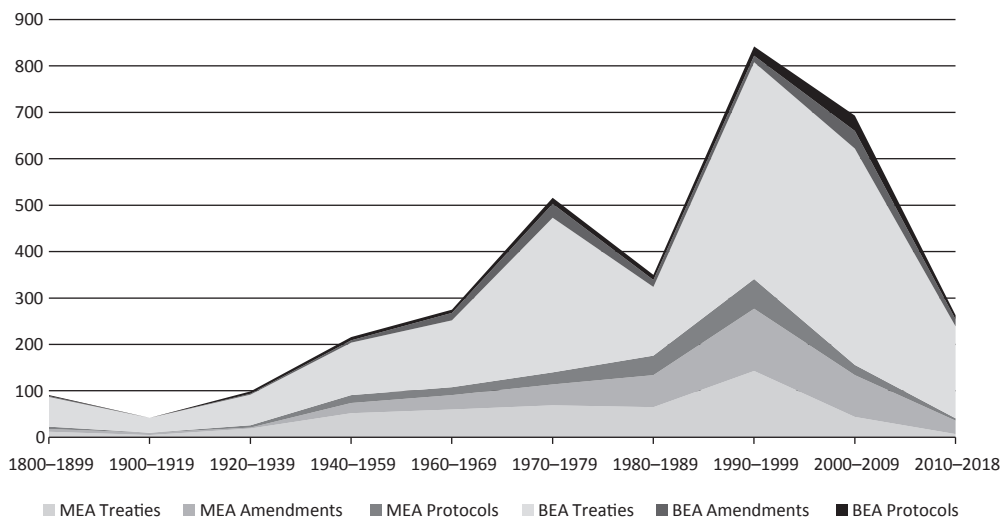

Figure 85.1   Multilateral (MEA) and bilateral (BEA) environmental agreements 1800–2018

the refutation of our preliminary observation of a global failure of states and other stakeholders to tackle environmental changes. Does the data not show that they at least strive to? The number of environmental treaties, amendments and protocols signed over time gives only a partial picture of environmental commitment across countries. It leaves open the question of the missing environmental topics, e.g. the topics that are not subject to any form of agreement, and, even more importantly, it does not give any information on the state of implementation of the environmental agreements. As Schachter (1991) emphasized, Principle 21 of the Stockholm declaration was at best a starting point, and at the time he wrote, had not yet become state practice: 'States generally do not "ensure that the activities within their jurisdiction do not cause damage" to the environment of others'. Nor have governments given any significant indication that they regard this far reaching principle as binding customary law. Environmental treaties, though numerous, are limited in scope and participation. On the whole, they are not accepted as expressions of customary law and are regarded as binding for the parties alone (Schachter 1991: 462). What it correctly reflects is the widening of the realm of international environmental law and the pervasiveness of the principles set up in Stockholm and later overhauled in Rio in 1992. They remarkably illustrate the horizontal diffusion of international environmental politics after Stockholm: environmental politics and law expanded in breadth and only occasionally in depth, in a bi-dimensional motion that still unfolds today.

The five norms we have listed as the hallmark of international environmental politics sustained the flourishing of environmental agreements but failed to gain much traction from developing countries or avert the possible conflict between rich and poor nations' preferences over the hierarchy of norms. The very existence of the Stockholm conference and the proliferation of environmental MEAs and BEAs that followed were mostly due to rich nations' communities of researchers, activists and policymakers, who intended to set environmental norms as overarching and transcending the development norms put forward by poor nations. The result is an odd mix of environment protection and development, the latter serving the former in some parts of the Declaration and conflicting with it in others: Principle 11, for instance, admonishes states against environmental measures that adversely affect development, while Principle 23 urges states 'to consider the systems of values prevailing in each country, and the extent of the applicability of standards which are valid for the most advanced countries but which may be inappropriate and of unwarranted social cost for the developing countries' (CHE, 1972). This uneasy mix superimposes, more than it organizes in a hierarchical setting, environmental preferences and development preferences. Only eight of the 109 recommendations of the Stockholm Declaration addressed development and environment altogether, stating primarily in the negative that environmental policies should not harm development and trade. Twenty years after Stockholm, the integration of development goals in global environmental practices remained weak by most measures (Bernstein, 2000: 470).

The confusion in the hierarchy of norms grew unabated after the second oil shock in 1979 and the rise of interest rates above the inflation level by US Federal Reserve after Ronald Reagan took office in the White House. In the early 1980s, plummeting export prices for most commodities and double-digit interest rates ignited a massive debt crisis in commodity-export dependent developing countries, to which the IMF and the World Bank responded by providing grants and loans conditioned by drastic austerity plans. These austerity plans reasserted the priority of economic growth and development in its narrowest meaning of generating income and wealth. The 'Washington Consensus', as Williamson (1989) termed it, with its set of free-market economic policies, positioned

developing states in a pro-development stance, exclusively of any other. Environmental protection was not a priority, nor even a part, of the structural adjustment programs. Leaving aside the Global Environment Fund, hosted by the World Bank upon the request of UN member states in 1992, the World Bank would not set up a strategy for environment protection until the early 2000s.

How to address development problems without reneging on environmental commitments made in Stockholm was the question raised by the UN Secretary General in 1983. Javier Pérez de Cuéllar asked the Prime Minister of Norway, Gro Harlem Brundtland, to create an organization independent of the UN to focus on environmental and developmental problems and solutions. The World Commission on Environment and Development (WCED), also named the 'Brundtland Commission', was to complete and broaden the work done by the Independent Commission on International Development Issues (Brandt Commission) in 1980, so as to create a united international community with shared environmental and development concerns – something that would from then on be defined as 'sustainable development' (WCED, 1987). The Brundtland report is credited for having coined the term, although some scholars suggest that the origins of the term probably lie in the Paris 'Biosphere Conference' and the Washington, DC, conference on the Ecological Aspects of International Development, which were both held in 1968 (Barbier, 1987: 102).

The 'sustainable development' concept put forward by the WCED is described as a 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (WCED, 1987). Concretely, the WCED aimed to legitimate economic growth in the context of environmental protection. Standing aloof from the conclusions of the Meadows report on the limits to growth, the WCED report titled 'Our Common Future' called for a minimum 3% increase in per capita income

per year in developing countries and also for redistributive policies to alleviate absolute poverty (WCED, 1987: 50–1, 89). Its call for a 'new era of growth' was clearly intended to get support from developing countries. The report also includes the recognition that the many crises facing the planet are interlocked: 'Separate policies and institutions can no longer cope effectively with these interlocked issues. Nor can nations, acting unilaterally' (WCED, 1987: 258).

Our Common Future (WCED, 1987) laid the groundwork for the convening of the 1992 Earth Summit and the adoption of Agenda 21, the Rio Declaration and the establishment of the Commission on Sustainable Development. It accelerated the transformation of a set of international environmental norms into a meta-regime (O'Neill, 2007).

'Perhaps the primary utility of viewing global environmental governance through the perspective of a meta-regime, consisting of rules, decision-making procedures, norms and principles, and actor roles is that it provides a dynamic, macro-level perspective on an evolving governance architecture, which nests the various individual international environmental treaty regimes', O'Neill (2007) wrote, pointing at the second major challenge facing the newly emerged international environmental norm. It had to gain in scope and participation and coalesce developing countries; rebalancing environmental and development norms with the promise of a 'new era of growth in which developing countries play a large role and reap large benefits' would be the means by which to achieve this (WCED, 1987). Not only that, it also had to address the risk of dispersal, fragmentation and shallowness voiced by researchers, conservationist and green NGOs; 'horizontal diffusionism' had to be balanced with 'vertical institutionalism', something the Rio meta-regime was crafted to achieve (Biermann and Dingwerth, 2004). Unlike Stockholm, whose origin was rooted in environmental concerns that would then trigger the horizontal (thematic) expansion of environmental

law (captured in Figure 85.1), the 1989 UN resolution 44/228, which launched the preparations of the United Nations Conference on Environment and Development (UNCED), explicitly linked environment and development and attempted to vertically institutionalise environmental protection through a set of binding conventions and protocols.

4. THE RIO META-REGIME: BASIC THEORIES AND CONCEPTS

The UNCED or 'Earth Summit', which took place in Rio in 1992, brought together 178 states (more than 100 represented by heads of state), 1,420 accredited NGOs (compared to 255 in Stockholm; 10 years later, this figure would rise to 15,000 and include several organizations from the private sector) and another 8,000 NGOs at the Global Forum, held in parallel to the conference (Clapp and Dauvergne, 2005: 68). In a nutshell, the major outcomes included the Rio Declaration on Environment and Development, the 40-chapter action plan 'Agenda 21', the UN Commission on Sustainable Development to oversee implementation and three major treaties: the UN Framework Convention on Climate Changes (UNFCCC), the UN Convention on Biodiversity (CBD) and the UN Convention on desertification.

The Earth Summit institutionalised a new regime or international law of environmental protection. When looking back, it strikingly captured the quintessence of the international liberal rule-based order, which existed from the fall of the Berlin wall in 1989 and the collapse of the Soviet Union to the fall of the World Trade Center in Manhattan 12 years later. It marked the durable expansion of the world social system, which henceforth includes not only economic and military and political dimensions but also prominent environmental institutional dimensions 'in which dynamic cultural and organizational orders provide the central catalysts for change' (Frank, 1997: 428).

The Rio meta-regime can be best described through the constructivist lens of international regime and epistemic communities' theories, and this is for at least two reasons. The first is that these theories have been designed to answer why and how sovereign states embark on negotiating behavioural rules to reach social objectives based on consensual knowledge and shared interests – these questions fit particularly well with the issue considered. The second reason is that these theories and concepts are less statist and static than their realist counterparts. In particular, they allow for the consideration of tactical linkages made with other issue areas and influential communities, which is of primary interest for understanding why and how a given set of new norms manages to find its way and settle within a pre-existing institutional architecture, and eventually secure its presence within it over time.

With the positive characteristics of international environmental politics, which we have inferred from the Stockholm conference in the opening of this chapter, we can associate the normative concepts and theoretical underpinnings brought about by international relations scholars in their attempt to define what we have called the Rio meta-regime.

The Role of Epistemic Communities

The emergence of the concept of 'epistemic communities', which is central in the dynamic of environmental norm-setting, can be traced back to Ludwig Fleck's ([1935] 1981) idea of the 'thought collective'. Kuhn (1962) explored the notion of scientific community and shared beliefs. Holzner (1972) was the first to use the term 'epistemic community' in 1968, while Ernst Haas (1992) introduced the concept to international relations in order to understand groups of scientists. The latter influenced today's major epistemic community scholars, namely John Ruggie and Emmanuel Adler, who were

Haas' students, as well as Peter Haas, his son. In 1975, Ruggie (1975: 570) broadened the scope beyond scientists, arguing that epistemic communities can arise from bureaucratic positions and technocratic training. He drew upon Foucault's concept of episteme, which he conceived as a means to delimit 'the proper construction of social reality for its members, and if successful, for international society'. In 1992, the year of the Earth Summit, Haas (1992: 3) operationalized the concept in a special issue of *International Organization*, defining an epistemic community as 'a network of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue area'.

Epistemic communities play a pivotal role in the cognitivist, knowledge-based approach of international regimes, but also in their liberal and realist alternative by instilling the possibility of learning and reasoning and, consequently, of fostering change in states' interests – a change that liberal and realist theories often ignore or fail to explain, considering states' interests and preferences as given. In the case of global environmental changes that are marred by uncertainty and complexity, the epistemic community as a concept has been extensively mobilised for 'articulating the cause-and-effect relationships, helping states identify their interests, framing the issues for collective debate, proposing specific policies, and identifying salient points for negotiation' (Haas, 1992: 2).

In her critical survey of the accomplishments of epistemic communities, Davis Cross (2013) found that 'research carried out using an epistemic community framework has demonstrated its promise'. The epistemic community framework, she contends, shed a much needed light on the transformation of international politics in fields such as Mediterranean-pollution control, nuclear-arms control, Chlorofluorocarbons ban, stratospheric ozone, European integration, climate change and AIDS in Africa (Cross,

2013). Through its emphasis on social learning in situations of uncertainties, epistemic communities provided a framework that is broad and flexible enough to account for the roles of science, experts and bureaucrats in the construction of the social problem and the design of the solution space. The contribution of the epistemic community framework to international theories and practice in the field of environmental changes is not debatable – yet this does not diminish the explanatory power of complementary approaches focusing on transnational advocacy networks (Keck and Sikkink, 1998) and transgovernmental networks of regulators, judges and legislators, in particular (Slaughter, 2004).

Multi-Stakeholder Responses and the Legitimacy of Participation Processes

The case made by epistemic communities and advocacy networks for expanding and deepening international environmental law provided a rising number of actors with a more informed understanding of environmental issues: 'The multiplicity of actors involved in environmental issues is greater than in any other field' (Henry and Tubiana, 2018). In the follow-up of the UNHCE, non-governmental actors and, later, indigenous peoples and local communities who practically had no place in international relations and multilateral organizations before, invited themselves to the negotiation process. They professionalized and thrived as activists, policy prescribers and voice of the voiceless: Nature and all these 'things' that Latour (2005) convened in a hypothetical parliament. To give a few insights into their achievements, let us quote Ecuador, which, in 2010, granted constitutional rights to Nature's existence, restoration and protection. That same year, the City of Pittsburgh banned hydraulic fracturing and recognized the rights of Nature (Henry and Tubiana, 2018). Complementing these documents,

The Global Alliance for the Rights of Nature now advocates for the ascension of Nature's rights (Ogorzalek and Rabb, 2018).

As a result of the inclusiveness and openness of the meta-regime of Rio, in the early 21st century 'NGO diplomats have access to a number of resources that give them power in multilateral negotiations', just like state actors, and 'although they rarely possess significant military capabilities, some NGOs have considerable economic resources, particularly in the private sector' (Betsill and Corell, 2007).

Formal consultations have been increasingly used after Rio by governments and international organizations in order to solicit public input into global policymaking through diverse forms. Agenda 21, adopted at the Earth Summit, formalized nine sectors of society as the main channels through which broad participation would be facilitated in UN activities related to sustainable development: women; children and youth; indigenous peoples; non-governmental organizations; local authorities; workers and trade unions; business and industry; scientific and technological community; farmers and persons with disabilities. These are officially called the 'Major Groups'. Agenda 21 leaves it up to the Member States to ultimately decide upon the modalities of participation of these 'Major Groups'.

20 years after the Earth Summit, at the outcome of the 'Rio+20 conference', governments agreed to launch 'an inclusive intergovernmental process open to the involvement of all relevant stakeholders' to elaborate global sustainable development goals (UNEP, 2012). The UN General Assembly established an Open Working Group on Sustainable Development Goals (SDGs) in January 2013, which in 2014 submitted a proposal of 17 goals and 169 targets for consideration by the General Assembly. Governments adopted the SDGs at a UN high-level summit in September 2015 as part of the 2030 Agenda for Sustainable Development. The UN Secretary General hailed this intergovernmental process as 'the most inclusive and transparent negotiation process in UN history' (UN, 2015). It provided civil society with many participatory channels, including direct participation in formal sessions of negotiations, hearings with the members and co-chairs of the OWG, global surveys, 11 global thematic consultations and more than 90 national and regional consultations (Sénit et al., 2017).

The request by some non-state actors to be treated on par with state actors, in the negotiation of international environmental laws – at least to have full and transparent access to it – raised the issue of the design and legitimacy of deliberative processes. This stream of research finds its source in the theories of global democracies, which propose different alternatives to structure, enhance participation and increase the overall legitimacy of the consultation or deliberation outcome. As Sénit et al. (2017) summarize, three intellectual stances compete.

'Cosmopolitans' argue that civil society participation should be linked to global political representatives, while 'critical approaches' advocate for disorganized protest and participation outside formal institutions. A third, 'liberal' approach favours the institutionalization of civil society participation in existing intergovernmental institutions. In their account of the multiple innovations made regarding civil society participation in the third 'Earth Summit' conference, held in Rio in 2012, they find that democratization of global policymaking cannot only rely on the insider participatory channels of the 'liberal approach'. Engagement channels, they conclude, based on disorganized protests or formalized citizen deliberation outside authoritative circles, are at least equally important to increasing the responsiveness of global policies to citizen concerns (Sénit et al., 2017: 70). The dynamic relationship between insiders and outsiders has led – in the particular case of sustainable development international politics – to the progressive inclusion of outsiders within the meta-regime: outsiders contesting the legitimacy of the regime's insiders become part of

the meta-regime and re-enforce its legitimacy. The meta-regime is self-sustaining, the very notion of insiders and outsiders being blurred over time by its flexible and hybrid properties.

This is particularly remarkable in the case of climate change. When it became clear in Copenhagen in 2009, that the UNFCCC regime based on burden-sharing between rich and poor countries did not perform, a decision was taken to complete it with an action agenda gathering non-state actors, private investors and cities in particular. The success of the Paris Agreement on climate change (2016) lies as much in the dynamic of UNFCCC diplomats as in the open and transparent negotiation platform, imagined to further tie diplomacy and the real economy. The particular regime that came out of this platform expands beyond the limits of the UNFCCC regime it superseded. The Paris Agreement, which is the hallmark and bedrock of this new climate regime, can be best defined as dynamic, flexible and hybrid. As Laurence Tubiana, France's chief ambassador for climate change explained (Henry and Tubiana, 2018: 13), 'The number and complexity of drivers made a top down regime working through central coordination mechanism almost impossible to achieve'. Therefore, the agreement needed to make room simultaneously for the notion that development choices are "nationally determined" or the need to have a collective mechanism to measure, review and verify (the transparency framework), the recognition of the inadequacy of the Kyoto concept and the need to get out of burden sharing and carbon budgets. There are virtually no outsiders to the Paris Agreement climate regime, even after the United States decided to withdraw; US firms and federal states are identified players of it, even though they are not parties to it. The double motion of horizontal diffusion and vertical institutionalization, which characterises the evolution of the Rio meta-regime, is also at play within its subparts, in a sort of fractal replication.

A liberal Agenda – or, the Footprint of 'Environmental Liberalism'

The norms of 'liberal environmentalism' predicate environmental protection on the promotion and maintenance of a liberal economic and political order – this liberal and political economic order that will triumph in the liberal decade that opened with the election of Bill Clinton in the United States and Tony Blair as leader of the UK Labour party in 1994. Steve Bernstein (2000), who coined the term liberal environmentalism, defines the Rio meta-regime as consubstantial to it: the Earth summit institutionalized it, with the view that 'environmental protection, economic growth and a liberal international economy are compatible, even necessary linked' (Bernstein, 2000: 465).

To give credence to Bernstein's view, scholars attempted to substantiate the claim that international liberalism and environmental protection mutually reinforced one another. This link was formally ascertained in the Preamble of the World Trade Organization (WTO) in 1994. Upgrading the Preamble of the GATT (1947), where no mention was made about the use of natural resources or anything close to our current definition of the 'environment', the Preamble of the WTO asserts that parties recognize that their relations should be conducted with a view to expanding the production of and trade in goods and services, while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development. (WTO, 1994: 9)

The trade and environment linkage actually predate the creation of the WTO, since it goes back to preparatory work for the NAFTA negotiations in 1992 and 1993. Institutionalized in the WTO by the

inclusion of sustainable development in the Organisation's Preamble, an ad hoc committee (environment committee) and case law gradually built around WTO article XX (b) and (g), authorising permanent exceptions from the general trade regime, it culminated in economic literature in the early 2000s with the publication of landmark books and articles. The conceptual framework developed to accompany NAFTA negotiations was empirically tested by Antweiler et al. (2001) for one particular pollution in a particular period of time (SO2 in the 1980s) – leading these authors to assert in the title of their renowned paper that 'Free trade is good for the environment'. A careful reading actually shows that the title is misleading and overstates an empirical relationship that, according to the authors themselves, cannot be generalized. Trade is not intrinsically good or bad for the environment; the relationship is empirical, and the determinants of its impact lie in the capacity of states to implement domestic policies that foster the reallocation of capital and labour towards cleaner activities. In the jargon of economists, the 'internalization of externalities' (which means setting a price to pollutions) and the polluter-pay principle are among the policy norms put forward by the Rio meta-regime.

Building on the premise that no international environmental-protection standard applies across countries, the countries with more stringent environmental policies have extensively used bilateral trade agreements to level the playing field and promote their own environmental standards. The EU, for instance, started to include a 'sustainable development chapter' in its bilateral agreements within the EU–Korea agreement of 2011. The EU has also submitted its trade policies and draft trade agreements, whether bilateral or multilateral, to the scrutiny of 'sustainability impact assessments' since 2001. After the failure of the WTO Ministerial Conference in Seattle in 1999, the idea was to give the European Commission a moral stature and reconcile international trade with civil society's vision about globalization. The sustainable development chapter of EU bilateral trade agreements aims for 'green' globalisation, which is compatible with the need to use scarce resources sparingly and to ensure environmental protection as it is referred to in WTO Preamble. This approach is supported by the trade community, which since the NAFTA negotiations has endorsed the idea that free trade can be good for the environment.

The main concern shared by civil society groups was that WTO and trade rules would supersede international environmental law. This fear was ignited by the capacity of the powerful WTO dispute-settlement body – the highest court in WTO infrastructure – to rule out environmental-protection measures on the grounds that these would be deemed disguised protectionist measures or would not satisfy the exemption requirements listed in various articles of the WTO. This concern culminated with the proposition from a group of a few scholars to 'green the GATT' and to create a World Environment Organization, conferring to environmental law a weight comparable to that of international trade law (Simonis, 2002).

The initiative for a 'Global Pact for the Environment', endorsed by UN General Assembly Resolution 72/277 in May 2018, can be seen as another attempt to accommodate environmental liberalism with a more effective protection of the environment and, to this end, to constitutionalize environmental law within an autonomous and self-enforcing instrument. The Global Pact for the Environment was launched in 2017 as an initiative to conclude a legally binding international instrument under the United Nations that 'synthesizes the principles outlined in the Stockholm Declaration, the World Charter for Nature, the Rio Declaration, the IUCN World Declaration on the Environmental Rule of Law, and other instruments to solidify the environmental rule of law' (IUCN, n.d.).
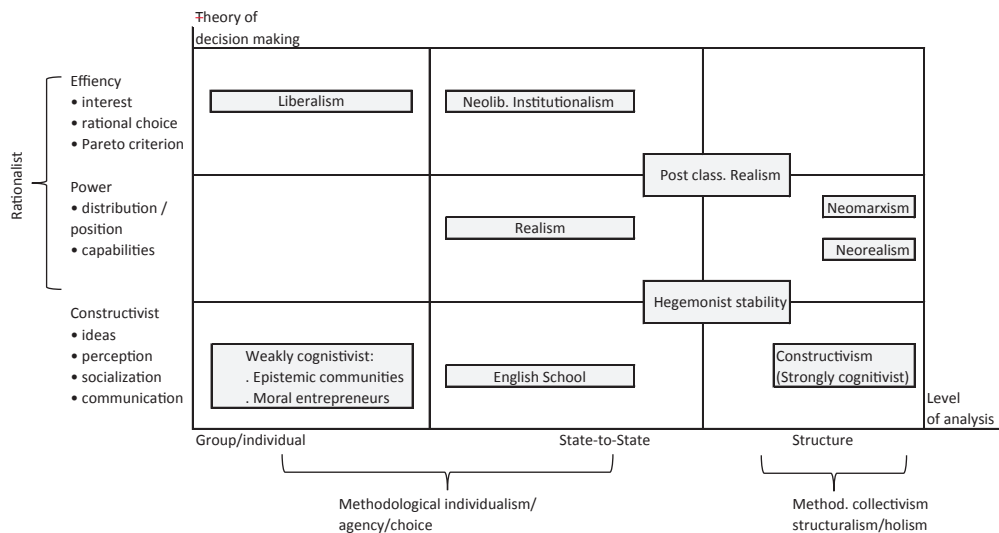
The World Environment Organization and the Global Pact for the Environment are attempts to 'verticalize' – e.g. to centralize

the scattered and fragmented environmental regimes that are part of the meta-regime of Rio. They also entail the programmatic responses to the environmental declines, assuming that these occur in large part because there is no legally empowered authority and there is no last-resort enforcer to assure global stewardship governance of Earth's environmental commons. Ultimately, they can be read as the testimonies of the lack of enforcement of ever-expanding horizontal environmental law and of the opportunity that is cost measured in terms of effective environmental degradation associated with liberal environmentalism's pervading norm.

HORIZONTAL DIFFUSION AND VERTICAL INSTITUTIONALIZATION

We present in Figure 85.2 a simplified overview of international relations theories of international cooperation, which can be mobilised to lay out the rationale for cooperation and for some, the dynamic of change in environmental agreements. The vertical axis distinguishes between different assumptions of decision-making while the horizontal axis distinguishes the behavioural unit on which the theory is built. The literature on international environmental changes has been polarized around the two poles of the constructivist and the liberal/neoliberal institutionalism. The climax of the influence and prestige of neoliberal institutionalism occurred at the very end of the 'liberal decade with the signature of the Kyoto Protocol on Climate Change in 1997 and the publication of the book 'Global Public Goods: International Cooperation in the 21st Century' (Kaul et al., 1999). 'Contrary to other international environmental protection conventions', Maljean-Dubois (2010) stressed, 'the Kyoto Protocol is based on economic tools governed by the 'invisible hand' of the market rather than by any official regulator'. The report from Kaul et al. (1999) laid the ground for an international cooperation system – with its new institutions inherited from Stockholm (1972) and Rio (1992) – which would be geared towards addressing global market failures and achieving global Pareto economic efficiency. Between these two poles, as observed by

Figure 85.2   Mapping out international relations theories of international cooperation

Source: Based on [AQ] (2007).

Falkner, realist and hegemonist stability theories have never 'fared well as a concept in the study of international environmental policy-making' (Falkner, 2005: 585). 'Curiously', he noted, 'the renaissance of the study of hegemony has left no discernible mark on the field of international environmental studies' (ibid.).

The rationalist approach focusses on the 'logic of consequences', while constructivists privilege the 'logic of appropriateness', so that norm-based decisions substitute rational and self-interested choices. The preferences of 'actors' do not shape the outcome according to constructivists: it is the structure that instead shapes actors' perceptions, and consequently their behaviour. Collective behaviour, then, can have a feedback impact on the system, in a reflexive and learning-by-doing dynamic that the static and statist approach of liberal environmentalism much too often ignores. For scholars and citizens concerned by environmental changes, however, it does not matter what theory is the most suitable to explain why and how international cooperation takes place (or not). The burning question is why don't institutions and arrangements deliver more environmental protection?

For an overwhelming majority of scholars, international environmental protection boils down to a collective action problem – the quest for of global remedy for the 'tragedy of the commons'. In the face of a common good in open access, solutions can be decentralized (*à la* Coase), with an allocation of property (or pollution) rights exchangeable on a market, or centralized, through a sanction mechanism averting free-riding behaviour. These two approaches can be combined. To take the example of climate change, the EU emission trading scheme, which allocates emission permits among polluting sites in the EU, clearly stems from the property rights and decentralized approach. Yet, the overall emission cut enabled by this decentralized mechanism at the EU level pre-existed it, in the form of the outcome of the centralized Kyoto protocol, committing each signatory state to a certain amount of emission

reduction. Even though sanctions were never used against non-compliant parties, the Kyoto protocol formally included a non-compliance mechanism to monitor and sanction breaches (Maljean-Dubois, 2010). Failure or success in delivering on the required change can thus hinge on explanation drawing on the decentralization-property-right literature and the centralization-compliance literature.

The decentralized-mechanism-based approach falls short on the issue of the distribution of property rights. What is a fair distribution of pollution rights, an issue also phrased as the distribution of a pollution 'budget'? On the one hand, 'grandfathering' is not acceptable to new polluters because of the excessive weight it gives to historical ones. On the other hand, the choice of fair allocation criteria of the pollution or green budget among countries with different historical responsibilities is hampered by the lack of consensus on the very meaning of fairness or justice, in the particular case of environmental changes. Are consuming countries responsible or should producing countries pay for the pollution? Should the pollution budget be broken down, taking into account future emissions or pollutions, and if so, what baseline should be used? Should the allocation be made on a per capita basis or at country level? The Kyoto regime on climate change failed to provide consensual answers to these practical questions.

The Montreal Protocol on Substances that Deplete the Ozone Layer is often quoted as 'one of the most successful international agreements ever adopted' (Barrett, 2016). The secret of its success lies in its ability to enforce participation by threatening to restrict trade in the controlled substances (mainly chlorofluorocarbons (CFCs)) between parties and non-parties. Other examples of international agreements considered as success such as the CITES (protection of endangered species) and the Carthagena Protocol to the Biodiversity convention (biosafety) directly rule on and ban international trade for certain species and living modified organisms.

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Hinging on these successes, some scholars have proposed the use of trade-sanction as a compliance mechanism of environmental treaties and as a stick for outsiders to join the agreement (Nordhaus, 2015).

An extreme solution to solve the non-compliance problem was formulated by Posner (2004). Adopting a resolutely institutionalist perspective, Posner first posits that international institutions must perform better in overcoming the prisoners' dilemma of avoiding environmental catastrophe. For him, the solution lies in what he names an 'international environmental protection agency' with autonomous enforcement powers. He admits that such an agency 'would involve a significant surrender of sovereign powers on the part of the nations of the world – which is probably why there is no such agency'. Yet he believes that 'there may be no feasible alternative means of curbing highly destructive global negative externalities' (Posner, 2004: 216).

To overcome the stalemate created by the lack of consensus on international environmental justice and the lack of effective compliance mechanisms in environmental agreements – with a few exceptions where trade restriction could be accepted – the choice was made by the architects of the Paris Agreement on Climate Change to resolutely decentralize the cooperation mechanisms further, with the inclusion of non-state actors like cities and private investors. A decision was also made to dismiss the issue of the distribution of the carbon budget and discard the possibility of sanctions. The hybrid, dynamic and inclusive agreement that resulted is an innovation, and, whatever its fate and future accomplishment, it demonstrates that learning and reflexivity came into play since the top-down centralized approach of Kyoto had been buried in the Copenhagen rampage in 2009, imparting a pendulum swing back to the constructivist pole.

The Paris agreement received the support of a constellation of non-state actors, and from figures that were not used to being vocal on the topic, such as asset managers and central bankers. In a speech given at Lloyds' in London in September 2015, a few months before the Paris Conference on Climate Change, Mark Carney (Governor of the Bank of England and Chairman of the Financial Stability Board) explained that while 'a classic problem in environmental economics is the tragedy of the commons. The solution to it [lying] in property rights and supply management, the world was confronted with Climate change with "the Tragedy of the horizon"' (Carney, 2015: 3). Carney stated that the impact of climate change would be felt beyond the traditional horizon of most actors – the business cycle, the policy cycle and the horizon of technocratic authorities like central banks. It becomes, as such, a systemic issue. 'In other words, once climate change becomes a defining issue for financial stability, it may already be too late' (ibid.). BlackRock's CEO Larry Finn joined the call to disclose carbon exposure and urged firms in BlackRock's portfolio to publish their strategy to address various climate risks.

Thus, a new dimension is added to the economic dimension of environmental changes, which made them a 'sustainable development' issue, in the wording of Rio – finance. Robins (2016: 7) described the multi-layered Paris Agreement as a new model of climate finance where three key aspects were coming together: 'the inner circle of the formal negotiations, the next ring of actions from financial system regulators and the outer circle of actions from the financial sector itself'. This expansion of an issue area, which originally was confined to and advocated for by environmental experts, to an increasing number of new 'circles', in Robins' term, is the continuation of the historical process we have tracked from Stockholm to Rio and beyond. A process of dynamic embeddedness to paraphrase Ruggie (1993), which unfolded through successive inclusions of new actors and the iterative transformation of the agency of responses. This decentralized expansion has faced periodical moments of halts and vertical consolidation, but soon after, the expansion resumed to garner support from

outsiders, with the hope that new alliances would deliver change and provide a solution to 'super wicked' policy problems, capable of resisting even substantial efforts by policymakers (Lazarus, 2009).

LITIGATION AS A WAY FORWARD?

Epistemic communities and environmental-expert networks encompass a broad range of scientific disciplines. This diversity is reflected in the composition of scientific institutions, which have emerged as the backbone of the community itself. The Intergovernmental Panel on Climate Change (IPCC) originally involved mostly climate scientists when it was set up by the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP) in 1988. It now encompasses experts from a very broad spectrum of sciences, including human and social sciences, to pay 'greater attention to the integration of climate change with sustainable development policies' (IPCC, n.d.).

There has been a proliferation of panels, scientific instruments, environmental journals and reports and evaluations by academies of sciences, which alert societies and decision-makers to the environmental damages caused by our economies, as Henry and Tubiana (2018) recalled, the IPCC being only one of them. The Millenium Ecosystem Assessment (MA), dating back to 2005, involved the work of more than 1,360 experts worldwide, across a large range of disciplines. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) was established by UN member states in 2012 to 'provide policymakers with objective scientific assessments about the state of knowledge regarding the planet's biodiversity, ecosystems and the benefits they provide to people, as well as the tools and methods to protect and sustainably use these vital natural assets' (IPBES, n.d.). IPBES does for biodiversity what the IPCC does for climate change.

While IPCC, MA and IPBES expanded in the range of scientific disciplines mobilised and the scope of issues covered, economics and law remarkably disassociated itself from the other disciplines to make the case for and shape environmental action. We conclude by focusing on the rise of litigation as an ultimate means to 'verticalize' the Rio meta-regime and spark policy responses to the 'super wicked' problem of environmental protection.

In a contribution to the fifth assessment report of the IPCC, Somanathan et al. (2014) recall that laws codifying national and international responses to climate changes have grown in number, specificity and importance. Litigation that followed not only focused on particular applications of such laws, it was also intended to incentivize or constrain legislators and policymakers to increase ambition and scale up action. According to UNEP (2017), as of March 2017 climate change cases had been filed in 24 countries (25 if one counts the EU), with 654 cases filed in the United States and over 230 cases filed in all other countries combined. The magnitude of climate litigation is such that some lawyers have created a database dedicated to it – the Climate Change Litigation Database[1]. Litigation cases provide spectacular examples of root-based, bottom-up initiatives against public legislators or private actors for escaping their obligation subscribed under national or international environmental law.

Some are rather young, as befits frontline victims of the looming disasters. In the United States, 21 citizens aged 11 to 22, from 10 different states, are suing the Federal government over immediate and future damages due to climate change negligence. The government asked for the case to be dismissed; contrarily, on August 2, 2018, the Supreme Court unanimously acknowledged that 'the breadth of the claims is striking' and ruled that the case should be heard as planned in the Oregon Federal Courtroom (Carrington, 2018). In India, Ridhima Pandey has filed a petition with the National Green Tribunal – the federal

court in charge of environmental matters – asking the tribunal to order the government 'to protect the vital natural resources, on which today children and future generations depend on for survival'. Ridhima Pandey is a 10-year-old student living in the state of Uttarkhand, which is routinely devastated by floods and landslides linked to changing conditions in the Himalayan Mountains. Ridhima Pandey has acted on behalf of children who could suffer in the future. The tribunal has decided to hear the case (Carrington, 2018). Further cases are underway, from India to Uganda and across Europe, including the UK, Ireland, Belgium, Portugal and Norway, where campaigners are seeking to block oil drilling in the Arctic. In Colombia, 25 young plaintiffs are taking to the courts to halt deforestation (Carrington, 2018).

Litigation is one way of giving future generations a say and a way to be consequent, with regards to the Brundtland definition of sustainable development – what economists do by using a 'discount rate' in their estimates of future values; but, the idea is the same. Litigation is also one way to further the 'verticalization' of the politics of environmental changes: it links international and national politics in a Putnam (1988) two-level game, by making international law the propeller of domestic legal action. Even though some scholars argue that companies do not believe the point has been reached where they are likely to lose cases, 'the legal actions add a further dimension to the pressure for change in an industry that has begun to accept the need to reinvent itself' (Nick Butler cited in Carrington, 2018). Litigants are still waiting for a court decision 'that says you cannot discriminate against young people and deprive them of a climate system that will sustain their lives' (Julia Olson in Carrington, 2018).

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Note

1 Arnold & Porter Kaye Scholer LLP (2017) Climate Change Litigation databases, available at climate-casechart.com.

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